

AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to Figure 4a to include reference characters 42 and 44. The attached drawing sheets also include changes to Figure 5a to remove reference characters 52 and 58, and to Figure 5b to remove reference character 58.

Attachment: Replacement sheets

REMARKS

Status of Claims

Claims 1-54 were pending. Claims 13-16, 21, 24, 26-52, and 54 were withdrawn. Claims 1, 2, 6-8, 10-12, 17, 19, and 22 have been amended. New claim 55 has been added. After entry of claim amendments, claims 1-55 are currently pending, with claims 1-12, 17-20, 22, 23, 25, 53, and 55 pending for examination.

Claim 1 has been amended to recite “first projections substantially vertical to said substrate surface having a height, diameter, and reciprocal spacing, forming a gradient with regard to the diameter or reciprocal spacing of said first projections such that separation of the component occurs.” Support for this amendment may be found throughout the specification and at least on page 13, lines 3-7; page 14, lines 1-5; page 17, line 29, to page 18, line 5; and Fig. 2. Claim 1 has also been amended to recite “such that lateral flow of said liquid sample in said transport or incubation zone is achieved.” Support for this amendment may be found throughout the specification as filed.

Claim 2 has been amended to recite “the gradient with regard to the diameter or reciprocal spacing of said first projections is adapted to prevent said component from substantially leaving said receiving zone.” Support for this amendment may be found throughout the specification and at least on page 18, lines 26-33; and page 19, line 17, to page 20, line 5.

Claims 6-8 have been amended to recite “said first projections.” Support for these amendments may be found throughout the specification as filed.

Claim 10 has been amended to recite “a second separator element provided adjacent to or in said receiving zone.” Claims 11-12 and 17 have been amended to recite “second separator.” Support for these amendments may be found throughout the specification and at least on page 14, lines 6-16.

Claim 19 has been amended to recite “further comprising an element for subjecting the sample to ultrasonic standing waves.” Claim 22 has been amended to recite “said element for subjecting the sample to ultrasonic standing waves.” Support for these amendments may be found throughout the specification as filed.

Newly added claim 55 is directed to an open flow path. Support for this newly added claim may be found throughout the specification and at least in Fig. 1a, Fig. 2, Fig. 3, and on page 24, lines 19-21.

Amendment of certain claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented. No new matter is added, thus entry of the amendments is respectfully requested.

Election/Restrictions

Applicants acknowledge that election of claims 1-25 and 53 has been treated as an election without traverse. Applicants further acknowledge that claims 13-16, 21, 24, 26-51, 52, and 54 have been withdrawn from further consideration as being drawn to a nonelected invention and/or species.

Drawings

Figures 4a, 5a, and 5b have been amended. No new matter has been added.

The Office has objected, under 37 CFR 1.84(p)(5), to the omission from the drawings of reference characters mentioned in the description. The Office notes that reference characters, “grooves or ridges 42” and “threshold 44” mentioned on page 6, lines 1-4, were omitted from Figure 4a of the drawings. Figure 4a has been amended to include reference characters “42” and “44.”

The Office also objected, under 37 CFR 1.84(p)(5), to the omission from the description of reference characters included in the drawings. The Office notes that reference characters “52” and “58”, in Figure 5a, and “58” in Figure 5b are absent from the description. Figures 5a and 5b have been amended to remove reference characters “52” and “58.”

Therefore, Applicants respectfully request that all objections to the drawings be withdrawn.

Claim Rejections Under 35 USC § 112

Claims 2 and 6-8 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection and its supporting remarks.

In claim 2, the Office found the term “said second projections adapted to prevent said component to be separated from liquid sample from substantially leaving said receiving zone” vague and indefinite, because it was unclear whether “said second projections” prevent said component from leaving said receiving zone, or if said “second projections” prevent said component from being separated from the liquid sample. Claim 2 has been amended to strike the term “to be separated from liquid sample.” Applicants respectfully assert that, as amended, claim 2 is clearly directed to projections that prevent said component from substantially leaving said receiving zone. Therefore, withdrawal of the rejection is respectfully requested.

In claims 6-8, the Office indicated that the term “said second projections” lack antecedent basis. Claim 6, from which claims 7 and 8 depend, has been amended to recite “said first projections,” which finds antecedent basis in claim 1. Therefore, withdrawal of the rejection is respectfully requested.

Claim Rejections Under 35 USC § 102

Claims 1, 2, 6, 9, 23 and 53 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Buechler (U.S. Patent No. 6,767,510). To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection and its supporting remarks.

To anticipate a claim, a cited reference must teach every element of the claim. MPEP § 2131. As amended, claim 1 recites “said separator element *consists of first projections* substantially vertical to said substrate surface having a height, diameter, and reciprocal spacing, forming a *gradient* with regard to the diameter or reciprocal spacing of said first projections such that separation of the component occurs, wherein said separator element *is provided adjacent to or in said receiving zone*” (emphasis added). Applicants respectfully assert that Buechler does not teach a separation gradient, formed by projections, adjacent to or in the receiving zone, as claimed.

Buechler fails to teach a separation gradient, formed by projections, adjacent to or in the receiving zone. While Buechler teaches that “a filter element can be placed in or on the sample addition reservoir **2**” (Col. 9, lines 3-5), Buechler makes clear that the filter element is a conventional filter and not the “projections substantially vertical to said substrate” of instant claim 1: “filter elements can be composed of nitrocellulose, cellulose, nylon, and porous polypropylene and polyethylene and the like” (Col. 24, lines 59-61). Furthermore, the “sample reaction barrier **3**” of Buechler, while controlling the flow of excess sample into the reaction chamber, is not disclosed as providing a component separating function. Certainly, Buechler does not mention a gradient in the diameter or reciprocal spacing of the “fingers” of its sample reaction barrier for any purpose, much less separation.

Given that Buechler does not teach a separation gradient, formed by projections, adjacent to or in the receiving zone, Buechler does not anticipate instant claim 1 or any dependent claim therefrom. Withdrawal of the rejection is respectfully requested.

Claim Rejections Under 35 USC § 103

Buechler in view of Doshi et al.

Claims 3-5 and 25 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Buechler (U.S. Patent No. 6,767,510) in view of Doshi et al. (U.S. Patent No. 5,660,798). To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection and its supporting remarks.

As noted above, Buechler fails to teach a separation gradient, formed by projections, adjacent to or in the receiving zone. Doshi et al. fail to remedy this deficiency of Buechler in rendering obvious the subject matter of instant claim 1, because Doshi et al. also do not teach a separation gradient, formed by projections, adjacent to or in the receiving zone. For at least this stated reason dependent claims 3-5 and 25 are not obvious over Buechler in view of Doshi et al. Withdrawal of the rejection is respectfully requested.

Buechler in view of Ohman et al.

Claims 7, 8, 10-12, 17, and 18 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Buechler (U.S. Patent No. 6,767,510) in view of Ohman et al. (WO 03/103835). To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection and its supporting remarks.

As noted above, Buechler fails to teach a separation gradient, formed by projections, adjacent to or in the receiving zone. Ohman et al. fail to remedy this deficiency of Buechler, because Ohman et al. also fail to teach a separation gradient, formed by projections, adjacent to or in the receiving zone. While Ohman et al. teach microposts (substantially vertical projections) and a separation means (page 7, line 13), Ohman et al. do not teach that the separation means integrated in the flow path downstream from the receiving zone is provided adjacent to the receiving zone: “at least one liquid flow path, optionally connecting different processing compartments within said

structure,” where the processing compartment can include a “separation means” (page 7, lines 8-13). Furthermore the gradient formed by groups of microposts (page 12, lines 16-24) of Ohman et al. is not mentioned as being provided in a specific zone, much less adjacent to or in the receiving zone. For at least this stated reason dependent claims 7, 8, 10-12, 17, and 18 are not obvious over Buechler in view of Ohman et al. Withdrawal of the rejection is respectfully requested.

Buechler in view of Diamond

Claims 19, 20 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Buechler (U.S. Patent No. 6,767,510) in view of Diamond (U.S. Publication No. 2002/0142351).

To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection and its supporting remarks. As noted above, Buechler fails to teach a separation gradient, formed by projections, adjacent to or in the receiving zone. Diamond fails to remedy this deficiency of Buechler in rendering obvious the subject matter of instant claim 1, because Diamond also does not teach a separation gradient, formed by projections, adjacent to or in the receiving zone. For at least this stated reason dependent claims 19, 20, and 22 are not obvious over Buechler in view of Diamond. Withdrawal of the rejection is respectfully requested.

For at least the reasons stated above, Applicants request withdrawal of the rejections under 35 U.S.C. § 103.

CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing **Docket No. 514862002700**. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Enclosure: Replacement Drawing Sheets